



BROADBAND EXPANSION GRANT APPLICATION

For Fiscal Year 2022

Primary Applicant (Name and Address): Huron Mountain Communications Co. 1901 W Ridge Street, Suite 2 Marquette, MI 49855	Applications MUST be UPLOADED to ERF via the Commission's website, http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx . Refer to section 2.3 for detailed instructions. Applications are due and MUST be uploaded to ERF no later than: March 17, 2022 at 4:00pm (16:00) Central Time. Late applications will not be accepted.
	Contact for further information: PSCStatebroadbandoffice@wisconsin.gov
	Date: December 1, 2021
<p>The Public Service Commission of Wisconsin is seeking applications for Broadband Expansion Grants. The Commission may award one or more grants during Fiscal Year 2022 to public and private entities that meet the eligibility requirements set forth in Wis. Stat. § 196.504. This grant round will be funded with bond proceeds authorized by the Wisconsin Building Commission pursuant to Wis. Stat. § 13.48(30). As such, successful applicants are subject to the requirements of Wis. Stat. § 13.48(30). Successful applicants will demonstrate a clear and achievable plan to improve broadband communications services in one or more underserved areas in the State.</p>	
<p>Applicant Certification: In signing this application, the undersigned verifies under penalty of perjury that the Applicant and its employees and agents have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition with respect to this application; that no attempt has been made to induce any other person or firm to submit or not to submit an application; that this application has been independently arrived at without collusion with any other proposer, competitor or potential competitor; that this application has not been knowingly disclosed prior to the opening of applications to any other applicant or competitor; that all of the responses and representations of Applicant in this application are true and correct to the best of the undersigned's knowledge, information, and belief; and that Applicant agrees to, accepts, and will comply with all of the terms and conditions respecting this application and any award of a broadband expansion grant as may be established in a grant award Agreement.</p>	
Name of Authorized Representative (Type or Print) Scott Randall	Title General Manager
	Phone () (906) 232-1012
Signature of Authorized Representative 	Date 

SUMMARY OF GRANT APPLICATION

Primary Applicant Name Huron Mountain Communications Co.	Amount of Broadband Grant Request (round to nearest dollar) \$9,226,199
Federal Employer Identification No. 26-2463-592	Amount of Matching Funds Pledged (round to nearest dollar) \$2,306,550
Contact Name and Title Scott Randall, General Manager	Total Cost of Proposed Project (round to nearest dollar) \$11,532,749
Telephone Number (906) 232-1012	Project Name Marinette-Oconto-Brown Middle Mile Fiber Project
E-mail Address(es) srandall@pfnlc.net	Type of Proposed Broadband Service (FTTH, Cable, DSL, etc.) Fiber To The Home (FTTH)
Grant Manager, if different than Primary Applicant Scott Randall, General Manager	Type of Proposed Project (Last-mile, Middle-Mile, backbone, other) Middle-Mile and Backbone
Grant Manager Contact Name Scott Randall, General Manager	Grant Manager Email Address and Telephone Number srandall@pfnlc.net (906) 232-1012
If the application proposes a public-private partnership, list the names, addresses, and FEINs of the partner companies or organizations N/A	
Brief Project Description (2 sentences) The Marinette-Oconto-Brown Middle Mile Fiber Project will construct a ~118-mile, fiber middle-mile network from Niagara to Green Bay, employing a partially folded, partially diverse ring architecture, to create redundancy for Huron Mountain Communications Co.'s (Huron) existing middle mile route that goes from Iron Mountain to Marinette to Green Bay and provide up to 16 Terabits capacity, relief, and additional diversification. The proposed middle mile facility will provide backhaul service at speeds of up to 16 Terabits to relieve a congested 1 Gbps circuit, relieving congestion for all ISPs along the route and improving reliability for all carriers.	
Maximum Proposed Download Transmission Speed 400 Gbps	Maximum Proposed Upload Transmission Speed 400 Gbps
Minimum Proposed Download Speed to Customer Location 100 Mbps	Minimum Proposed Upload Transmission Speed to Customer Location 100 Mbps
County or Counties served by this project Marinette, Oconto, Brown	Community or Communities served by this project

	Niagara, Pembine, Beecher, Amberg, Wausaukee, Middle Inlet, Crivitz, Beaver, Pound, Lena, Coleman, Oconto Falls, Krakow, Pulaski
List of the broadband service providers, if any, currently serving the area the applicant proposes to serve NSight, CenturyLink/Lumen, Astrea, Frontier, Charter, AT&T Wisconsin	
Does proposed project serve an <u>unserved</u> area of the State, as defined in <u>Section 1.4</u> of the application instruction? (yes/no) Yes	Is the Applicant certified as a Broadband Forward! Community or Telecommuter Forward! Community, or does the grant project propose to serve a Broadband Forward! Community or Telecommuter Forward! Community? (yes/no) No. But, Huron is willing to do so if the communities identify as such in the future.
For last mile projects or component the expected number of Business Locations that will have access to the improved broadband service (i.e., total business locations passed or with new service access). The Marinette-Oconto-Brown Middle Mile Fiber Project is a middle mile project and thus will enable retail carriers to deliver high-speed broadband at speeds up to 400/400 Gbps to a number of business locations throughout and adjacent to the proposed funded service area at a cost savings.	For last mile projects or components the expected number of Residential Locations that will have access to the improved broadband service (i.e., total residential locations passed or with new service access). The Marinette-Oconto-Brown Middle Mile Fiber Project is a middle mile project and thus will enable retail carriers to deliver high-speed broadband at speeds up to 400/400 Gbps to a number of residential locations throughout and adjacent to the proposed funded service area at a cost savings.
Of the improved business locations, how many locations are <u>unserved</u> ? The Marinette-Oconto-Brown Middle Mile Fiber Project is a middle mile project and thus will enable retail carriers to deliver high-speed broadband at speeds up to 400/400 Gbps to a number of unserved business locations throughout and adjacent to the proposed funded service area at a cost savings.	Of the improved residential locations, how many are <u>unserved</u> ? The Marinette-Oconto-Brown Middle Mile Fiber Project is a middle mile project and thus will enable retail carriers to deliver high-speed broadband at speeds up to 400/400 Gbps to a number of unserved residential locations throughout and adjacent to the proposed funded service area at a cost savings
For providers that are eligible telecommunications carriers will the proposed broadband service be available to Lifeline customers? (yes/no) No. This is a middle mile service that all retail carriers may use. These retail carriers often do provide Lifeline to their customers.	Are there any programs available for low-income households to access low-cost service or discounts? (yes/no) No. This is a middle mile service that all retail carriers may use. These retail carriers often do participate in programs available for low-income households to access low-cost service or discounts.
Is the internet service provider currently participating in the Emergency Broadband Benefit Program? (yes/no) No. This is a middle mile service that all retail carriers may use. These retail carriers often do participate in the Emergency Broadband Benefit Program.	Is the internet service provider currently participating in the Department of Public Instruction and CESA purchasing's Digital Learning Bridge? (yes/no) No
Did the internet service provider participate in the Public Service Commission's voluntary Broadband Coverage Data Collection in 2021? (yes/no) No	

FY22 Broadband Expansion Grant Application

Budget & Income Summary



Grant Summary

Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

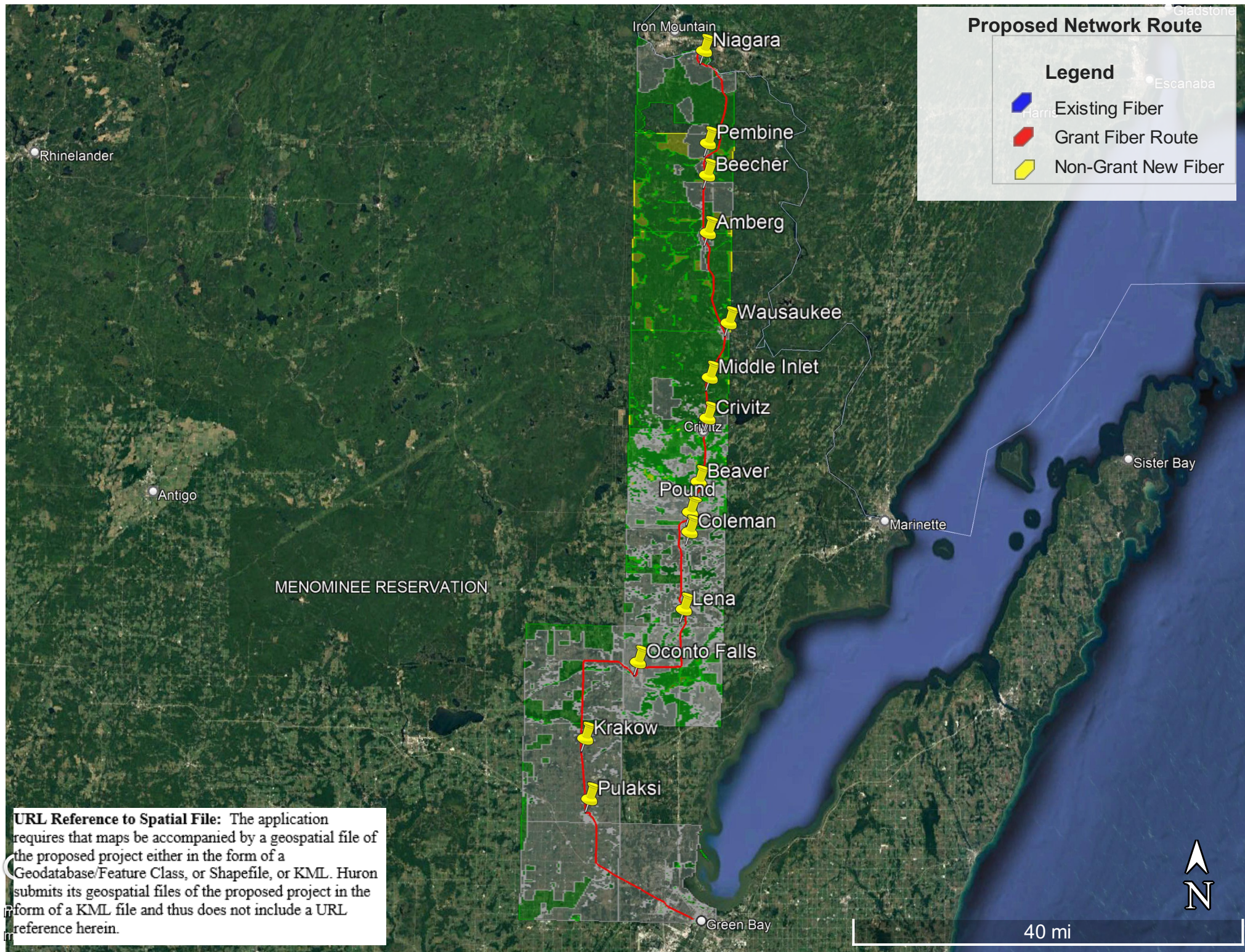
Grant Applicant:	Project:
Huron Mountain Communications Co.	Marinette-Oconto-Brown Middle Mile Fiber Project

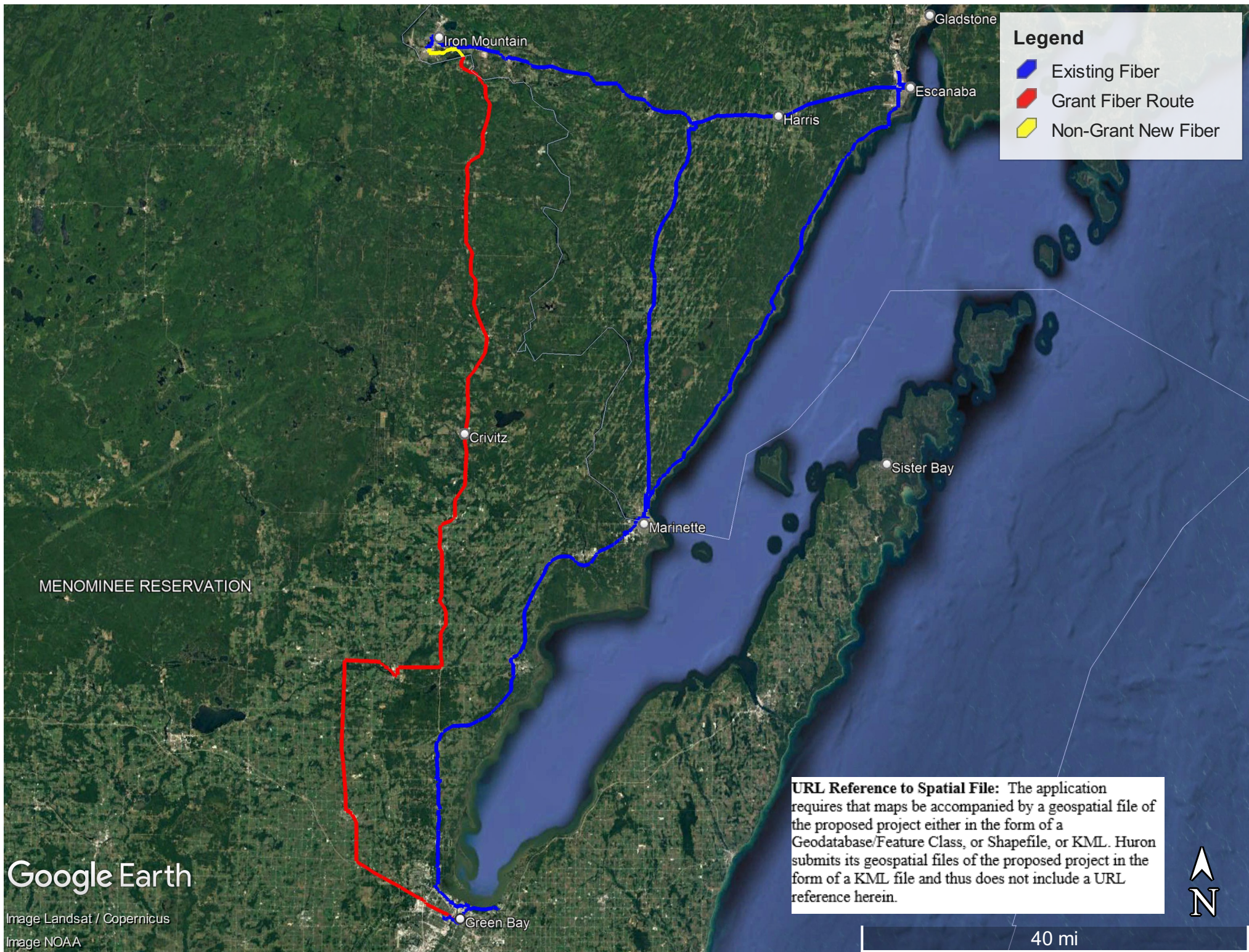
Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	\$ 8,688,545.50	\$ 2,172,136.38	\$ 10,860,681.88
2	Equipment	\$ 515,953.60	\$ 128,988.40	\$ 644,942.00
3	Supplies	\$ -	\$ -	\$ -
4	Labor (Salary, Fringe)	\$ 21,700.00	\$ 5,425.00	\$ 27,125.00
5	Permitting, Licensing Fees	\$ -	\$ -	\$ -
6	Travel	\$ -	\$ -	\$ -
7	Other	\$ -	\$ -	\$ -
Total:		\$ 9,226,199.10	\$ 2,306,549.78	\$ 11,532,748.88
				20.0% match requested

Pledged Contributions

#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	PFN	Applicant	Cash	\$ 2,306,549.78
2				
3				
4				
5				
6				
7				
8				
9				
10				
Total:				\$ 2,306,549.78





3.2.1 Applicant identification and contact information

a. Name of Entity: Huron Mountain Communications Co. (a wholly owned subsidiary of Peninsula Fiber Network (PFN))
Address of Entity: 1901 W Ridge Street, Suite 2, Marquette, MI 49855
Mailing Address: 1901 W Ridge Street, Suite 2, Marquette, MI 49855
Contact Person: Scott Randall
Telephone: (906) 232-1012
Email Address: srandall@pfnllc.net

b. If the application proposes a public-private partnership, the identity and contact information for all application partners.

Huron Mountain Communications Co. (Huron) does not currently have a formally executed monetary partnership with the local communities through which the proposed project will pass yet details how it has partnered with key stakeholders in response to 3.2.4(b), which is summarized below:

- Huron has received a joint letter of support from the Wisconsin State Senator for the 12th Senate District, Mary Felzkowski, and Wisconsin State Representative for the 36th Assembly District, Jeff Mursau, noting that the proposed middle-mile network will run through a region that has been “trailing” other Wisconsin regions in broadband investment and state broadband grant awards.
- The Director of Marinette County’s Economic Development Program, Jennifer Short, not only submitted a letter of support for the proposed project but also participated in the New North Regional Broadband Access Study in furtherance of the project.
- Barb LaMue, President and CEO of New North, also provided a letter of support, detailing findings of their New North Study, which documents how this project will bring economic development benefits to the region, attract businesses, and recruit and retain talent.
- Finally, as evidence of Huron’s partnership with Florence County, via its parent company Peninsula Fiber Network (PFN), and efforts to provide Next Generation 911 (NG911) service to the county, the Sheriff of Florence County, Dan Miller, provided a letter of support for the proposed project. PFN currently provides a fiber middle-mile and backbone network, similar to the one proposed, in Florence County.

c. The application must show that the applicant is an organization, a telecommunications utility, or a city, village, town, or county that has established a legal partnership or joint venture arrangement with an otherwise qualified organization or telecommunications utility, and as such meets the eligibility requirements set forth in Wis. Stat. § 196.504(1).

Huron is a for-profit organization, incorporated in Michigan on August 7, 2006, and headquartered in Marquette, Michigan (ID Number: 800675541). As such, Huron meets the eligibility requirements set forth in Wis. Stat. § 196.504(1). Huron is a wholly-owned subsidiary of Peninsula Fiber Network (PFN). Founded in 2004 in Marquette, MI, PFN is a middle-mile and enterprise last-mile provider that offers services to private and public entities including FirstNet, healthcare networks, cellular providers, and ISPs. PFN is also a covered 911 service provider, delivering 911 capabilities to almost all of the 911 providers in Michigan. PFN's fiber-optic cable network extends throughout Michigan and parts of Wisconsin. PFN provides redundant Internet backbone access for its parent companies, Baraga Telephone Company (BTC) and Hiawatha Communications, Inc. (HTC).

3.2.2 Description of the project

a. A static map and description of the area of the State that will be affected by the proposed project.

Huron includes a map of the area that will be affected by the proposed project on page five of this application. Huron's proposed middle mile network will stretch across Marinette, Oconto, and Brown Counties, and serve the following communities: Niagara, Pembine, Beecher, Amberg, Wausaukee, Middle Inlet, Crivitz, Beaver, Pound, Lena, Coleman, Oconto Falls, Krakow, and Pulaski. A URL reference to a spatial file showing the proposed service area is on page four of this application. Huron also submits a geospatial file of the proposed project via email, as required.

b. If the project area lies within a census block designated as served on the PSC Broadband Map, provide additional documentation to demonstrate the actual broadband service that is available in the proposed project area.

The proposed project is a middle mile network that all retail providers may use. Current broadband service providers in the proposed service area include NSight, CenturyLink/Lumen, Astrea, Frontier, Charter, and AT&T Wisconsin. Thus, some of the census blocks along the proposed network's route are designated as served. The proposed project will enhance the services these retail carriers provide to their end users.

c. An explanation of how the proposed project will increase broadband access.

The Marinette-Oconto-Brown Middle Mile Fiber Project will construct a ~118-mile, fiber middle-mile network from Niagara to Green Bay. This fiber will complete a fiber ring that extends into Michigan to provide reliability, redundancy and additional capacity to all retail broadband service providers in northern Wisconsin. This project will first increase broadband access by creating redundancy for Huron's existing middle-mile route from Iron Mountain to Marinette and then to Green Bay and providing up to 16 Terabits capacity, relief, and additional diversification. Network redundancy is not only an industry best practice but also contained in a number of official best practices under the Communications Security, Reliability, and Interoperability Council (CSRIC), an advisory committee of the Federal Communication

Commission (eg., BP 12-10-1065, 12-10-5075, 12-12-3277, 12-12-5249f). As a Covered 911 Service Provider, or one which brings 911 traffic directly from service providers to 911 call centers, Huron's project will facilitate the flow of 911 call traffic across the state.

Huron's project will provide access up to 400/400 Gbps middle-mile facilities to all retail broadband providers along its route. Many of these providers currently are constrained in their ability to add middle-mile capacity. In addition, the current route is a point-to-point facility which is susceptible to cable cuts and local power outages. This new route will eliminate these potential points of failure and thus increase reliability. Huron's project will also increase broadband access by enabling retail carriers to deliver broadband speeds with the potential to reach up to and including 400/400 Gbps simultaneously to locations throughout Marinette, Oconto, and Brown Counties, sparking economic opportunities, facilitating educational aspirations, enhancing healthcare, and bolstering public safety. But for this project, these residents would otherwise have lesser quality services or lack the ability to participate in real-time services such as E-Learning, video streaming, telehealth, and telework.

The proposed middle mile network will create a redundant fiber ring and provide up to 16 Terabits capacity directly to a POP in Iron Mountain, Michigan, allowing retail carriers to access the POP and multiple high-speed Internet options.

Huron's proposed middle-mile network will provide retail carriers with high capacity, low latency access to serve customers in rural communities located along the proposed network's path with much needed access to high-speed, affordable, and reliable broadband. Huron's proposed middle mile network will allow end user carriers to reliably deliver high-speed broadband to residential and business locations throughout the proposed service area at a cost savings. Huron's proposed middle-mile network will enhance the long-haul routes connecting communities served with broadband to deliver affordable and reliable Internet but also provide a fiber-based infrastructure for local end-user carriers to leverage to provide broadband service to residents and businesses along the network. Huron's proposed design will help unserved and underserved communities along the path by offering a low cost of entry broadband facility to multiple local fiber-to-the-premises providers, cellular providers, and fixed wireless operators that have towers in these communities. Retail carriers will be able to leverage Huron's proposed middle mile network, thereby lowering the current expense associated with serving customers in the rural communities in the proposed service area. As customer demand increases over time, retail carriers may acquire additional direct connect services rather than having to increase its bandwidth to Internet connection which would be used for general broadband functions.

The proposed project is for a middle mile network that all retail providers may use. Huron anticipates that the proposed middle mile fiber project will indirectly serve approximately 15,000 homes with broadband. Huron also provides service to commercial and governmental entities and expects that the proposed project could directly serve approximately 500 customers.

Additionally, and perhaps most importantly, Huron will provide the state with twelve fiber strands for the state's exclusive use to serve state-owned locations. This would provide the state with access to its own private fibers that no other customers can use, meaning that the state's fibers will never be oversubscribed. Thus, the proposed project would provide the state with a

future proof connection to use for the locations that it owns and increase broadband access for these locations, many of which are in high-cost-to-serve areas.

d. A statement whether the proposed project is targeting the “last mile,” “middle mile,” or backbone portion of the broadband infrastructure

The Marinette-Oconto-Brown Middle Mile Fiber Project will primarily target the middle mile and backbone portion of the broadband infrastructure.

e. A description of the broadband service to be provided, including estimated download and upload speeds, whether the speed is based on dedicated or shared bandwidth, and the technology that will be used. This description may be illustrated by a map or schematic diagram, as appropriate.

Huron’s Marinette-Oconto-Brown Middle Mile Fiber Project is an entirely fiber-based project that will extend Huron’s existing middle-mile fiber network with up to 16 Terabits capacity from Niagara to Green Bay, Wisconsin for retail carriers on an up to per 400/400 Gbps basis at a reasonable and just rate. Huron will also provide capacity to other broadband providers at competitive commercial rates. Huron also monitors its Internet for growth and will continue to add upstream Tier 1 connections, peering points, and content providers to make Internet faster, more secure, and more reliable.

The proposed project also will provide twelve private fiber strands to the state of Wisconsin for the state’s exclusive use to serve state-owned locations. This would provide the state with access to its own private fibers that no other customers can use, meaning that the state’s fibers will never be oversubscribed. Thus, the proposed project would provide the state with a future proof connection to use for the locations that it owns and increase broadband access for these locations, many of which are in high-cost-to-serve areas.

Retail carriers will have access to the lower latency provided by the new connection but the retail rate will not increase. Upon completion, the proposed middle-mile network will benefit the area’s residents, businesses, government entities, and anchor institutions while conforming to all applicable federal, state, and local requirements and standard engineering practices.

Huron’s proposed middle-mile network will use company matching funds to enable rural communities located along the proposed network’s path to access high-speed, affordable, and reliable broadband. The project will create redundancy for the existing half of the fiber ring, enhancing and helping to complete the state’s open, state-wide middle-mile network. Huron’s proposed middle-mile network will enhance the long-haul routes connecting communities served with broadband to deliver affordable and reliable Internet but also provide a fiber-based infrastructure for local end-user carriers to leverage to provide broadband service to residents and businesses along the network. The proposed network will accomplish this via its middle-mile and backbone connectivity and local access and last-mile delivery. Huron’s proposed design will help unserved and underserved communities along the path by offering a low-cost of entry broadband facility to multiple local fiber-to-the-premises providers, cellular providers, and fixed wireless operators that have towers in these communities.

The scope of the proposed project includes the construction, design, and installation of one conduit with a 144-count fiber cable running the entire length of the middle-mile, splicing, handholes, huts, a second conduit reserved for last mile, and local access fiber to interconnect this unserved and underserved area to Huron's already expansive low-latency, well-connected Internet core. The proposed project is designed with multiple handholes and access points to maximize availability and interconnectivity.

- f. For middle mile projects: (i) Identify last mile broadband service providers that will connect to the middle mile facility; (ii) If the participation of last mile providers is uncertain or cannot be disclosed publicly at the time of the application, describe the providers that could interconnect under appropriate circumstances; (iii) How long would it take for last mile connections to result? and (iv) Describe process for use of right-of-way (ROW) in collaboration with others digging or burying facilities (Dig Once program, etc.).**

The overall middle mile project will place 122 miles of fiber between Iron Mountain, Michigan and Green Bay, Wisconsin. Huron is seeking funding for the Wisconsin portion which comprises 118 miles of the total project and will construct the remaining 5.8 miles and purchase and install the electronics located at its Iron Mountain, Michigan facilities with its own funding. Huron will match 20% of the Wisconsin portion of the build.

The exact last mile providers that will connect to the proposed middle mile facility are unknown at this time. Huron currently provides services for the following ISPs in Michigan: Bug Tussel, Pasty.net, Jamadots, M33, Cherry Capital, UP Telephone, Northern Michigan University, and MERIT, which provides access to educational institutions across Michigan. In Wisconsin, Huron provides services for NSight, Packerland, WINN Network, Astrea, and backhaul for AT&T Wisconsin and AT&T Mobility. Huron's parent company, Peninsula Fiber Network (PFN), also provides redundant Internet backbone access for its parent companies, Baraga Telephone Company (BTC) and Hiawatha Communications, Inc. (HTC).

Retail carriers such as NSight, CenturyLink/Lumen, Astrea, Frontier, Charter, and AT&T Wisconsin currently provide service to certain communities along the proposed route and would be able to interconnect under appropriate circumstances. The current retail carriers serving the proposed service area then would have access to Huron's middle-mile facilities and be able to leverage the proposed middle mile network and focus their efforts on continuing to build out their networks posed network to serve these unserved and underserved communities.

Huron is actively soliciting last mile providers to sign onto the proposed middle mile network once Huron builds out the middle mile network and estimates that it will take approximately two years to complete the build out. Huron will submit applications for any city or county permits required. Securing access to the necessary rights of way is the first step of the build out process and will take approximately 4-8 weeks, depending on the requirements. If there are no significant obstacles to obtaining the right of way agreements, it should not be difficult to obtain the necessary permits associated with the proposed construction. Huron will then proceed with the field engineering and design process, including obtaining all information regarding distance, locations of streets, driveways, sidewalks, and any other significant obstructions to both aerial

and underground construction. Once the field engineering is complete, Huron will prepare the fiber design, bill of materials, and splicing documentation drawings and order materials. Huron is aware of the supply chain delays and budgets 6-9 months based on similar project timelines.

Then, construction on the OSP will begin. Once the OSP infrastructure has been completed, the fiber cable will be installed and tested back to the core site and from the core side to the Edge site location to confirm that the completed network and fiber can deliver the proposed services.

To help improve communications among all interested parties and limit disruption in the impacted areas, Huron plans to utilize its membership in the Diggers Hotline and participate in the state's Dig Once program and notify interested parties such as City Managers and Public Works Departments of the proposed construction project so that they may take advantage of the project. For example, the Wisconsin Department of Transportation is planning a resurfacing and construction project in Marinette County that will impact the routes of US 8 and US 141, routes that will also be impacted by the proposed network project, beginning in 2022. This could be a good opportunity for Huron to employ the state's Dig Once program.

g. A schedule by which the applicant intends to complete the components of the proposed project. The project period is up to 24 months.

If the grant application for the project is approved by May 2022, the project schedule identified below will take up to 24 months, which is based on similar projects it has completed:

June 2022 – March 2023	Project planning and pre-engineering
June 2022 – March 2023	Pending grant approval, order and stage equipment*
April 2023 – October 2023	Pending grant approval, bury new backbone and distribution fiber**
March 2024 - April 2025	Pending grant approval, testing of network assets
Begin Feb 2024	Pending grant approval, digital literacy and community outreach

*Huron is aware of the supply chain delays and budgets 6-9 months based on similar project timelines.

** Due to weather conditions, Huron will not be able to begin construction until after the ground thaws in spring of 2023.

3.2.3 Itemized Budget (all amounts should be rounded to the nearest dollar)

a. In addition to the Summary of Project Budget that is included as page 3, applicants should include a price list or quote for any equipment the applicant intends to purchase, including capital expenditures.

Huron includes the price list quote with its application, both in the "Attachments" section herein below and the Project Budget Excel uploaded separately.

b. The application must show that the grant, if awarded, will not subsidize the expenses of a telecommunications provider or the monthly bills of telecommunications customers.

As further detailed below, Huron certifies that the grant, if awarded, will not subsidize the expenses of a telecommunications provider or the monthly bills of telecommunications customers.

c. The application must show that the grant funds requested will be used for the sole purpose of constructing broadband infrastructure in the underserved areas covered by the application.

Huron certifies that the grant funds requested will be used for the sole purpose of constructing broadband infrastructure in the proposed service area covered by the application. The scope of the proposed project includes the construction, design, and installation of one conduit with a 144-count fiber cable running the entire length of the middle-mile, splicing, handholes, huts, a second conduit reserved for last mile, and local access fiber to interconnect this unserved and underserved area to Huron's already expansive low-latency, well-connected Internet core. The proposed project is designed with multiple handholes and access points to maximize availability and interconnectivity. Huron's project addresses fundamental obstacles to providing reliable, low-cost broadband through a reliable middle-mile and backbone broadband network. During the proposed project, Huron will secure all necessary rights of way and obtain the necessary state and local permits associated with the proposed construction. Once Huron completes the field engineering and design process, Huron will prepare the bill of materials and splicing documentation drawings and order materials. After Huron constructs the OSP infrastructure, it will install the fiber cable and perform tests to the core site and from the core side to the Edge site location to confirm that the completed network and fiber can deliver the proposed services.

3.2.4. Priority factors supporting the application

a. Matching funds.

As described above, Huron will contribute \$2,306,550, 20% the total project cost, to the proposed project. The total cost of the proposed project is \$11,532,749. Huron seeks \$9,226,199 in grant funding from the Public Service Commission of Wisconsin for the proposed project.

If awarded, Huron proposes to provide the State of Wisconsin with an infeasible Right to Use (IRU) twelve fibers along the full 122 miles of cable placed. The State may use these fibers to serve state-owned properties. This equates to \$1.4 million of the total capital investment in the project. Huron will assume responsibility for the maintenance cost of the fibers. This in-kind match contribution will provide the state with its own exclusive, future proof Internet connection for the locations that it owns. Such a connection is incredibly valuable and would help significantly increase broadband access to the locations that it owns, many of which are in high-cost-to-serve areas.

To connect the proposed project to its existing network in Michigan, Huron will also spend its own funds to expand its network from the Wisconsin border to Huron's existing network and POP in Iron Mountain, Michigan. Huron has excluded the construction costs and other costs associated with connecting the proposed network to Huron's existing network in Michigan from the matching contribution and grant funds sought in this application.

For more detailed information on what portions of the cost Huron will fund with its match, please see the completed Funding Statement on page four of the application.

b. Public-private partnerships.

While there is no formal public-private partnership associated with the proposed project, Huron through its parent company, PFN, engaged with impacted counties, communities, and stakeholders on the proposed project. Huron also leveraged its relationships and partnerships with service providers to determine the level of need in the communities along the proposed network's route.

Huron engaged with the Director of Marinette County's Economic Development Program, Jennifer Short, who confirmed that a highly redundant and secure middle mile network, such as the one proposed, would be highly attractive to high tech businesses and manufacturing entities that require access to a highly resilient network. Huron includes a copy of the support letter submitted by the Director of Marinette County's Economic Development Program with its application.

Huron also researched the broadband needs in the impacted communities. Research determined the City of Oconto Falls has a large hospital, HSHS St. Clare Memorial Hospital, that is listed as a critical access hospital, licensed for 25 inpatient beds. In the hospital's 2021 Community Needs Assessment Report, the hospital identifies that it will provide tele-stroke medicine and tele-emergency department consultations. Oconto County is also home to a veterinary clinic and a number of assisted living and memory care facilities with multiple locations across the state. The proposed middle mile project would create a redundant and reliable network for these health care providers as they expand their services, and for state entities in underserved and unserved areas across the state.

Furthermore, Huron engaged New North Inc., a nonprofit, regional economic development corporation that fosters collaboration among private and public sector leaders throughout 18 counties in Northeast Wisconsin. Huron's discussions with New North revealed that the proposed project would fulfill the middle mile needs identified in New North's recent broadband study. New North is calling for the construction of a new fiber middle mile throughout this region. The proposed project follows nearly the exact path as proposed by New North. The similarities of New North's needs and Huron's ability to fulfill them with this project has created synergy between the entities as well as hopes of continued collaboration on each of their behalf's. This synergy is reflected in New North's support letter included in the application.

Finally, Huron has also planned collaborative efforts with local public safety and 911 facilities to offer Next Generation 911 (NG911) service, which will "enhance emergency number services to

create a faster, more resilient system that allows voice, photos, videos and text messages to flow seamlessly from the public to the 911 network,” according to 911.gov. Communication with such data-rich capabilities enhances first responders’ ability to save lives and serve the community. According to the National 911 Database, as of 2020, Wisconsin is only at the Foundational Level for meeting NG911 procurement milestones at the sub-state level.

A fundamental requirement for providing stable, consistent NG911 services is a redundant and reliable fiber optic network. Huron, through its parent company PFN, has extensive fiber deployment expertise as well as experience working with the 911 call centers and government entities to provide Next Generation 911 (NG911) capabilities to the communities it serves

PFN currently provides a fiber middle mile and backbone network, similar to the one proposed, in Florence County. PFN provides NG911 service to the county, enabling residents to text 911, creating greater interoperability between call centers, and assisting in call volume management. As evidence for the strong partnership that PFN has created with Florence County, the Sheriff of Florence County, Dan Miller, provided a letter of support, attached, detailing the merits of PFN’s service to Florence County, and the positive impact it has had on the safety and well-being of residents. As of the submission date of this grant application, 100% of the wireless and landline 911 calls in Florence County are handled by PFN’s NG911 technologies. That is not the case in any other Wisconsin county. PFN will use its successful relationship with Florence County to market its services in the proposed project area and help further deploy NG911 across the state.

Awarding PFN the middle-mile grant funding that it seeks will enable PFN to work alongside Marinette, Oconto, and Brown Counties and deploy the necessary resilient, fiber, middle-mile broadband network to serve these rural communities, attract economic opportunities and improve access to emergency services through the improved flow of 911 traffic across the state.

c. Existing broadband service

End user carriers such as NSight, CenturyLink/Lumen, Astrea, Frontier, Charter, and AT&T Wisconsin currently provide service to communities along the proposed middle-mile route. In Wisconsin, Huron currently provides services for NSight, Packerland, WINN Network, Astrea, and backhaul for AT&T Wisconsin and AT&T Mobility.

Huron includes a map of the area that will be affected by the proposed project on page five of this application. Huron’s proposed middle mile network will stretch across Marinette, Oconto, and Brown Counties, and serve the following communities: Niagara, Pembine, Beecher, Amberg, Wausaukee, Middle Inlet, Crivitz, Beaver, Pound, Lena, Coleman, Oconto Falls, Krakow, and Pulaski. According to Census Data, the communities encompassing the proposed service area have a combined population of 34,819. According to the Public Service Commission of Wisconsin’s Broadband Map, many of the communities on both sides along the proposed network’s route are underserved. The proposed network’s route also includes unserved rural communities on both sides of the route mainly in Marinette, Wausaukee, Crivitz, Pound Coleman, Lena, and a portion of Oconto Falls. Huron includes in its application a map of the proposed middle mile network, and has overlaid the map with the unserved and underserved areas for reference. Furthermore, the proposed middle mile project encompasses portions of the

New North, Inc.'s study's recommended geographic route for a middle mile network, specifically in Marinette and Oconto Counties, connecting several communities that have been identified as having broadband needs in the region.

The proposed project is for a middle mile network that all retail providers may use. Huron anticipates that the proposed middle mile fiber project will indirectly serve approximately 15,000 homes with broadband at speeds of up to 400/400 Gbps. Huron also provides service to commercial and governmental entities and expects that the proposed project could directly serve approximately 500 customers.

The proposed middle mile network will reduce the cost of extending fiber to the premises. Retail carriers will be able to provide broadband to business and residential locations in the unserved or underserved area at a cost savings. Huron's proposed middle-mile network will enhance the long-haul routes connecting communities served with broadband to deliver affordable and reliable Internet but also provide a fiber-based infrastructure for local end-user carriers to leverage to provide broadband service to residents and businesses along the network. This will attract more retail carriers to serve the unserved and underserved communities along the proposed network's route, creating more competition among providers in the area and potentially driving down costs for end users. Finally, this is not a last mile project and as such will not interfere with existing and planned last mile fiber projects to the customer/ end-user location. Huron will not be competing with these providers and instead the proposed project will enhance the providers' abilities to connect to the Internet and provide better service at lower costs to the unserved and underserved communities located along the route.

d. Project impact

The Marinette-Oconto-Brown Middle Mile Fiber Project will construct a ~118-mile, fiber middle-mile network from Niagara to Green Bay, employing a partially folded, partially diverse ring architecture, to create redundancy for Huron's existing middle mile route from Iron Mountain to Marinette and then to Green Bay. The proposed middle mile network will create a redundant fiber ring and provide up to 16 Terabits capacity relief, and additional diversification directly to a POP in Iron Mountain, Michigan, allowing retail carriers to access the POP and multiple high-speed Internet options. The proposed project will immediately benefit those retail carriers using Huron's current middle-mile network by offering protection against any potential fiber cuts or loss of service as well as any new last mile providers seeking to use this network. Should such an event occur, the proposed middle mile network will be able to take on 100% of the traffic to avoid service disruptions to end users. Additionally, the project will provide the state with twelve fiber strands for ~118 route miles, for the state to use. Such a connection did not exist previously.

The proposed network will stretch across Marinette, Oconto, and Brown Counties, and serve the following communities: Niagara, Pembine, Beecher, Amberg, Wausaukee, Middle Inlet, Crivitz, Beaver, Pound, Lena, Coleman, Oconto Falls, Krakow, and Pulaski. According to Census Data, these communities together have a combined population of 34,819. Almost all of the impacted communities are either unserved or underserved as depicted in the Wisconsin Broadband Map. Huron anticipates that the proposed middle mile fiber project will indirectly serve approximately 15,000 homes with broadband at speeds of up to 400/400 Gbps. Huron also provides service to

commercial and governmental entities and expects that the proposed project could directly serve approximately 500 customers.

Huron's proposed design will help unserved and underserved communities along the path by offering a low cost of entry broadband facility to multiple local fiber-to-the-premises providers, cellular providers, and fixed wireless operators that have towers in these communities. Retail carriers will be able to leverage Huron's proposed middle mile network, lowering the current expense associated with serving rural customers and prompting more retail carriers to serve the proposed service area. Increased access to broadband throughout Marinette, Oconto, and Brown Counties will spark economic opportunity, facilitate educational aspirations, enhance healthcare, and bolster public safety by delivering high-speed Internet to a population that otherwise would have lesser quality services or lack the ability to participate in real-time services such as E-Learning, video streaming, telehealth, and telework. Additionally, retail carriers would be able to also offer qualifying customers discounts through low-income programs such as Lifeline or the Emergency Broadband Benefit program, further reducing the cost of service for some customers. Huron plans to leverage the connections it already has in the service area to further promote broadband adoption once the project is complete.

e. Scalability

The proposed middle-mile, fiber network is scalable due to the immense bandwidth capacity of the fiber optic cable itself and its long-term viability. With growing demand for more services and capacity, the 16 Terabits capacity network provides adaptability and scalability to handle bandwidth needs and advanced services and applications that are central to end users' needs. The bulk of the overall project budget for fiber projects is associated with constructing the fiber optic cable. However, fiber cable infrastructure has an estimated life of approximately thirty years. The electronics used to deliver services over the fiber optic cable are projected to have a lifespan of approximately ten years. Therefore, Huron anticipates that the network will last for decades and will deploy two or three generations of electronics during the thirty-year lifespan of the fiber optic cable. As broadband data speeds improve in the future, the proposed network can scale so that each generation of electronics may dramatically increase the broadband speeds available to end users. Given that the electronics are a small percentage of the overall project budget, any necessary future electronics upgrades will only have a small impact on the total investment required to provide reliable, high-quality, high-speed broadband services over the thirty-year period.

Furthermore, having additional middle mile can help all ISPs throughout the state by providing redundancy and alternative routing to improve overall service and reliability and more capacity, driving down the cost of Mbps in general.

f. Economic development

Access to more affordable, reliable, and faster broadband will improve the overall economic vitality for those living and working in the unserved and underserved areas of Marinette, Oconto, and Brown Counties and their surrounding areas. Unfortunately, according to the Wisconsin State Broadband Plan, "many thousands of Wisconsin residents do not have access to the minimum speed of 25 megabits per second download and 3 megabits per second upload (25/3

Mbps), thousands more are unable to afford service and throughout the state, residents have issues with the speed, quality, and performance of their internet.”

Huron’s proposed middle-mile fiber route from Niagara to Green Bay will serve two purposes. First, it will create a redundant fiber ring to ensure limited downtime from accidental fiber cuts or equipment failures, which is an industry best practice. Second, it will facilitate last-mile connections to customers who will use and rely on broadband service to email, read articles, complete homework assignments, and communicate with others. It will also provide direct connections to government entities and cellular providers. In turn, this will yield environmental benefits, helping to reduce the amount of paper used, printed, and sent. Better broadband will also allow more people to telecommute, reducing the number of people driving and emissions, and use telemedicine for remote medical appointments.

The middle mile project will rely on fiber, a future-proof solution that can last more than 25 years. According to Forward Analytics November 2020 report analyzing the FCC’s Form 477 data, only 1 in 5 residents statewide use a fiber connection. Increasing fiber deployments in Wisconsin will lead to fewer physical repairs, reducing the number of truck rolls that need to be sent out for repairs. Many repairs and upgrades to higher speed can be accomplished via software commands and updates. Fiber networks use less energy than copper or wireless. This can reduce greenhouse gas emissions because it will provide the opportunity for customers to telecommute rather than drive to work each day.

The COVID-19 pandemic demonstrated how great the need for access to broadband. Huron’s project will expand economic opportunities, facilitate educational aspirations, enhance healthcare, and bolster public safety by enabling last mile providers to deliver high-speed broadband services to residents who otherwise would have lesser quality services or lack the ability to participate in real-time services such as E-Learning, video streaming, telehealth and telework. This project would enable customers to access telemedicine, remote learning, have access to online retailers, and stay connected to family. The opportunity to work at home will allow customers to pursue more job opportunities or develop new businesses thus increasing economic growth and stability.

Right now, Wisconsin ranks 36th nationwide in terms of accessibility in rural areas, which ranges widely across rural Wisconsin. Huron’s proposed middle mile network will stretch across Marinette, Oconto, and Brown Counties, three rural counties in the state. Huron’s middle mile project will enable last mile-providers to offer residents and community anchor institutions scalable broadband services at speeds of up to and including 400/400 Gbps.

Affordable high-speed internet is essential to modern life and the growth and prosperity of rural regions in Wisconsin. More people are working from home than ever, especially in light of the COVID-19 pandemic. Work from home job opportunities are growing rapidly, but they require reliable internet service. Many remote working jobs require video conferencing capabilities, which require high bandwidth service.

According to the US Census, Marinette County is the 3rd largest county in Wisconsin with a poverty rate of 13%, which is nearly 3% higher than the state poverty rate. The county’s population is 41,872 with a median household income of \$50,330, which is \$14,000 less than the

state's median household income. Only 15% of the county's population has a bachelor's degree, and the county's employment rate is only 55%. Eighty-one percent of the population is over 18 years old and 23% is over the age of 65. Twenty-eight percent of the employed population works in manufacturing and 20% in educational services, health care and social assistance. Only 41% of the population has access to broadband speeds of 25mbps or higher.

The latest US Census data also shows a total population of nearly 39,000 in Oconto County with a median household income of \$60,000 and only 16.8% with a bachelor's degree or higher. Nearly 80% of the population is aged 18 or older and 10% of the population are veterans, 3% higher than the state. Seventy-nine percent of school enrollments are K-12. 71% of workers work for private companies. 24% of the working population works in the manufacturing industry and 19.4% in educational services., health care and social assistance. Nearly 14% of the population is disabled, nearly 2% higher than the state average. Oconto County has 789 small businesses. Only half of the population has access to broadband of 25mpbs or higher, according to FCC data.

Brown County has 530 square miles and a total population of nearly 270,000. The median household income is \$64,000 and 5.9% of the population does not have health insurance. Nearly 11 percent speak a language other than English at home and nearly 16% of the population is older than 65 years old. Brown County has a poverty level of 10.3% Just 72% of the county has access to speeds above 25mps, which is 25% below the State Broadband Plan's target of 97%.

According to a University of Wisconsin-Madison study, "Broadband is becoming increasingly important to the community and economic well-being. It is linked to better business performance, including rural entrepreneurship and farm profits. It is also linked to higher home values and higher educational outcomes at both the grade school and high school levels. Broadband access also corresponds to improved health outcomes, which can lead to higher worker productivity."

The New North Study also found that 92% of area businesses believe that the internet is important to the success of their business over the next five years, but only 27% of area businesses are satisfied or very satisfied with the speed of their current internet service. 82% of businesses in the area want better internet access. A strong middle mile network, like the one proposed by Huron, will help last-mile providers serve Wisconsin customers in the way they need to succeed and compete economically. Furthermore, The New North Study found that "a regional middle-mile dark fiber network would be an extremely powerful economic development tool—allowing tech-oriented businesses to located almost anywhere in the New North region."

g. Effect upon broadband service to adjacent areas

As a middle-mile network project, the proposed project will enhance, not impair, the ability of broadband service providers or competing broadband service providers to extend broadband service to areas adjacent to the proposed project area. Huron's proposed middle mile network will enhance retail carriers' long haul routes and provide a fiber-based infrastructure for local retail carriers to leverage to provide broadband service to residents and businesses along the network. Huron's proposed design will help unserved and underserved communities along the path by offering a low cost of entry broadband facility to multiple local fiber-to-the-premises

providers, cellular providers, and fixed wireless operators that have towers in these communities. The proposed network will provide retail carriers with high-capacity, low latency access to serve end-users and reduce the costs of extending fiber to the premises. This will allow retail carriers to provide much needed broadband to business and residential locations in the unserved or underserved area at a more affordable rate. As customer demand increases over time, end user providers may acquire additional direct connect services rather than having to increase its bandwidth to Internet connection which would be used for general broadband functions.

Furthermore, if awarded this grant, Huron will allocate twelve fiber strands for the state's exclusive use to serve state-owned locations.

3.2.5 Other information supporting the application

a. A description of applicant's history or experience constructing broadband communications facilities in the State and elsewhere.

Huron's parent company, Peninsula Fiber Network (PFN), operates one of the largest broadband fiber optic networks in the Upper Midwest, spanning all of Michigan, Northern Wisconsin, and a small portion of Minnesota. Over ten years ago, Baraga Telephone Company (BTC) partnered with Hiawatha Communication Inc. (HCI) from Munising, MI, to form PFN, based in Marquette, MI. PFN is a middle-mile and enterprise last-mile provider that offers services to private and public entities including health-care networks, cellular providers, and ISPs. In addition, PFN provides service to almost all of the 911 call centers in Michigan. PFN's fiber-optic cable network extends throughout the state of Michigan, and parts of Wisconsin. Finally, PFN provides redundant Internet backbone access for its parent companies BTC and HCI. The company is primarily a rural provider with an extensive list of customers located in areas that have been historically ignored by large telecommunications providers. PFN is also a carrier's carrier, providing transport services to almost all carriers in its footprint. The company's carrier customers in Wisconsin include WINN Network, Packerland, AT&T Wisconsin, AT&T Mobility, Astrea, and NSight. PFN currently services more than 300 cell towers supporting 3G, 4G, and 5G wireless technology. In Wisconsin, PFN currently operates a broadband network spanning eight counties: Douglas, Bayfield, Ashland, Iron, Florence, Marinette, Oconto, and Brown.

PFN has a proven track record for successful deployment of 100% fiber optic transport networks. PFN is able to successfully deploy these types of fiber builds by employing local skilled and knowledgeable managers, plant technicians and business office staff. PFN operates in excess of 2,600 route miles of fiber, providing Optical Transmission, Tandem Transport and Switching, Ethernet Transport, TDM Transport, high volume "Core Internet" access, and Wireless Backhaul. PFN and its parent companies, BTC and HCI, have in excess of 190 combined years of operational experience in bringing transmission services to the rural telecommunications marketplace. Huron will leverage the experience and knowledge of its parent company, PFN, to successfully undertake the proposed project.

Huron will also be able to leverage the BTC's management teams' experiences successfully completing a number of broadband buildout projects, including but not limited to the following:

- 1995 – BTC begins providing Internet dial-up service throughout Michigan’s Upper Peninsula.
- 1999 – BTC begins offering competitive local exchange telephone and broadband service in Chassell, MI.
- 2000 – BTC becomes the first telephone company in the Upper Peninsula of Michigan to offer high-speed DSL internet access to customers.
- 2002 – BTC expands service to Crystal Falls, MI
- 2003 – BTC builds out its DSL network to about 4,900 telephone lines and 2,400 DSL customers.
- 2018 – BTC accepts A-CAM II funding to deploy over 300 miles of fiber optic cable, over 200 miles of which have already been deployed to date.
- 2019 – BTC starts deploying DSL to FTTP conversion in its core service territory of villages of Baraga and L’Anse, that were not part of the A-CAM II funding.
- 2021 – BTC successfully applied for and was awarded \$\$444,490.80 in RDOF funding to serve three census block groups in Houghton County, MI (CLEC territory).

Finally, Huron has already successfully built and maintains the middle mile network route from Iron Mountain to Marinette and then to Green Bay, which will serve as the other half of the fiber ring Huron is attempting to close with the proposed project. The duties required to complete these past projects and maintain existing networks are analogous to those associated with the proposed project. Huron will thus be able to leverage not only its previous success and experience, but also that of PFN and BTC’s, to complete the proposed project.

b. A description of how the proposed project will or will not duplicate existing broadband infrastructure.

The Marinette-Oconto-Brown Middle Mile Fiber Project will avoid duplicating existing broadband infrastructure by constructing a ~118-mile, fiber middle-mile network from Niagara to Green Bay, employing a partially folded, partially diverse ring architecture. This project will first increase broadband access by creating redundancy for Huron Mountain Communications Co.’s (Huron) existing middle-mile route from Iron Mountain to Marinette to Green Bay and to provide up to 16 Terabits capacity, relief, and additional diversification. The proposed middle mile network will create a redundant fiber ring and provide up to 16 Terabits capacity directly to a POP in Iron Mountain, Michigan, allowing retail carriers to access the POP and multiple high-speed Internet options. The proposed project will immediately benefit those retail carriers utilizing Huron’s current middle-mile network by offering protection against any potential fiber cuts or loss of service. Should such an event occur, the proposed middle mile network will be able to take on 100% of the traffic to avoid service disruptions to end users. Additionally, the project will provide the state with a free, future proof connection to the Internet, via twelve fiber strands for ~118 route miles, for the state to use. Such a connection did not exist previously. Finally, this is not a last mile project and as such will not interfere with existing and planned last mile fiber projects to the customer/ end-user location.

c. A description of an applicant’s financial ability to undertake the proposed broadband construction project.

Huron, through its parent company Peninsula Fiber Network (PFN), has the financial ability to undertake the proposed broadband construction project, as evidenced by its successful operations throughout Michigan and parts of Wisconsin over the last ten years. Huron is a wholly owned subsidiary of PFN. PFN operates one of the largest broadband fiber optic networks in the Upper Midwest, spanning all of Michigan, Northern Wisconsin, and a small portion of Minnesota. The company is primarily a rural provider with an extensive list of customers located in areas that have been historically ignored by large telecommunications providers. PFN is also a carrier's carrier, providing transport services to almost all carriers in its footprint. The company's carrier customers include AT&T Wisconsin, AT&T Mobility, NSight, Astrea Connect, CenturyLink, and Charter. PFN currently services more than 300 cell towners supporting 3G, 4G, and 5G wireless technology. In Wisconsin, PFN currently operates a broadband network spanning eight counties: Douglas, Bayfield, Ashland, Iron, Florence, Marinette, Oconto, and Brown. PFN operates in excess of 2,600 route miles of fiber, providing Optical Transmission, Tandem Transport and Switching, Ethernet Transport, TDM Transport, high volume "Core Internet" access, and Wireless Backhaul. Such current business operations and networks suggest that Huron, through PFN, is capable of generating enough revenue from content providers and other carriers to sustain this project. Huron, along with PFN, has a proven track record for successful deployment of 100% fiber optic transport networks and thus is well positioned to undertake the proposed project.

d. For middle mile projects, state the terms under which the applicant will make its middle mile fiber resource available to last mile providers.

Huron certifies that it will offer access to the middle-mile fiber resource to last mile providers at a rate that is reasonable and common to the industry. Huron, through its parent company Peninsula Fiber Network (PFN), has a history of successfully and reliably serving an extensive list of customers and providing transport services to almost all carriers in its footprint. Through the proposed project, Huron will continue its legacy as a reliable and fair provider.

e. For middle mile routes, state the amount of fiber capacity, by number of fiber strands in a cable, that the applicant has been reserved for public use.

If awarded, Huron proposes to provide the State of Wisconsin with an infeasible Right to Use (IRU) twelve fibers along the full 122 miles of cable placed. The State may use these fibers for any legal purpose including for State official traffic, Internet access and voice service for the useful life which is estimated to be 20 years. This equates to \$1.4 million of the total capital investment in the project. Huron will assume responsibility for the maintenance cost of the fibers. This in-kind match contribution would provide the state with its own exclusive, future proof Internet connection. Such a connection is incredibly valuable and would help significantly increase broadband access to the locations that it owns, many of which are in high-cost-to-serve areas.

f. A description of how the proposed project will affect the ability of individuals to access health care service from home.

The proposed middle-mile project will give hospitals and health care facilities access to fiber, thereby enabling the offering of telemedicine services. According to the Wisconsin Department of Health Services, as of May 2017, the Wisconsin Medicaid Survey found that providers' use of telehealth services is average, including 50% of hospitals, 20% of providers, and only 7% of pharmacies, showing significant opportunity to offer more telehealth services. The proposed project will increase residents' ability to access critical healthcare service from home. The proposed middle-mile network will run through Oconto County, which is home to HSHS St. Clare Memorial Hospital – a large hospital that is listed as a critical access hospital, licensed for 25 inpatient beds. In the hospital's 2021 Community Needs Assessment Report, the hospital identifies that it will be providing tele-stroke medicine and tele-emergency department consultations. Oconto County is also home to a veterinary clinic and a number of assisted living and memory care facilities with multiple locations all over the state. The proposed project would create a redundant and reliable network for providers and state entities to leverage, at a low cost, to expand these necessary services to underserved and unserved areas both in the proposed service area and across the state. Additionally, the state could also leverage the twelve fiber strands being donated as part of the proposed project to promote better access to telehealth services in rural communities.

Throughout the COVID-19 pandemic, access to reliable, telehealth services has never been more critical. Patients can remotely access their doctors to receive early treatment and lower the risk of exposure to COVID-19. According to a 2020 report on expanding affordable broadband access from the National Governor's Association, a FAIR Health analysis found that remote services insurance claims in April 2020 rose more than 8,000 percent from the prior year, demonstrating a significant increase in the uptake of telehealth.

The majority of the communities located along the proposed middle mile network's path are very rural and lack access to many nearby clinics, hospitals, doctors' offices and/or other places for residents to seek health services. HSHS St. Clare Memorial Hospital is located far away for many, making it challenging for residents to frequently schedule and attend doctor's appointments. The Wisconsin Broadband Map illustrates that there are a number of underserved and unserved communities along the proposed middle-mile network route, limiting these patients' abilities to connect with their doctors virtually and vice versa. Access to high-speed, reliable Internet will allow these patients to contact their physician almost instantly through On Demand type applications, communicate with their healthcare providers more frequently via their My Chart account messaging service, renew prescriptions, make appointments, and better manage their overall health. Patients' more frequent interactions with doctors can keep them accountable and improve their health, routines and lifestyles, enhancing the quality of life in these communities.

Lack of access to telemedicine also creates additional burdens for elderly populations reliant upon relatives for their transport to receive medical attention. According to the US Census Bureau, the population of persons 65-years and older in Marinette County, Oconto County, and Brown County is 20.0%, 20.1%, 14.4%, respectively, compared to 17.5% for the state and 16.5% for the country. The elderly population in the unserved and underserved areas served by the proposed project will particularly benefit from the increased access to telehealth services fast, reliable internet access can provide.

Residents in the proposed service area that lack access to sufficient broadband risk missing out on high quality healthcare options that are readily available to others with broadband access. Remote rural healthcare facilities are often unable to attract, afford, or retain specialty providers. Telehealth helps resolve these issues by providing access to specialists regardless of the geographic location of the patient or provider. Telemedicine technology paired with specialty medical devices can enable remote, more specialized physicians to “see” patient as if they were in the exam room together. The physician can examine the patient, review vital signs and patient history, provide assessment, diagnose, and treat all while the patient is in the comfort of their own home, minimizing or eliminating the need for travel by the patient or specialist. As such, the proposed project must move forward to address this important need.

According to a recent Telehealth Coverage Survey Summary from the Wisconsin Office of the Commissioner of Insurance of 34 companies, 94% expanded telehealth services during the beginning of the pandemic, including behavioral health, physical therapy, speech therapy, and occupational therapy. Some of the types of expanded services include remote patient monitoring, home health, hospice, virtual doula visits, and virtual autism skills training.

FAIR Health’s Monthly Telehealth Regional Tracker also shows that the top five diagnoses treated in November 2021 were mental health conditions, acute respiratory diseases and infections, COVID-19, developmental disorders, and substance use disorders. The proposed middle-mile network will make it possible for any health care facilities on the route to provide virtual services to treat these conditions.

Finally, University of Wisconsin-Madison Population Health Institute reported in the County Health Rankings that as access to broadband increases, the percentage of the population within counties that report poor or fair health decreases. The study also found that as broadband access increases, the average number of days individuals report experiencing poor mental health by county decrease.

g. A description of how the proposed project will affect the ability of students to access educational opportunities from home.

Access to remote learning via broadband connectivity is a significant need in the proposed project area. The US Census Bureau data shows 19.0% of the Marinette County population, 20.2% of the Oconto County population, and 23.9% of the Brown County population is under 18-years old, indicating that around one-fifth of the population is in need of access to broadband to access remote learning. Similarly, 25% of respondents in the New North Study report having at least one K-12 student in the home, while 12% of respondents had at least one college student in their home. In fact, 49% of respondents said that someone in their household uses or needs the Internet to complete school assignments or participate in distance learning.

Even before the COVID-19 pandemic, students needed Internet to study and complete homework assignments and research projects. The need for reliable broadband access continues to be critical with the growing number of COVID-19 variants and subsequent associated quarantine requirements.

According to 2020 Forward Analytics Report, of the Wisconsin school districts serving fewer than 500 students, nearly half reported significant problems with students accessing the Internet at home and at least 25% had no broadband at home.

One of the counties the 122-mile fiber ring will pass through is Oconto County. There are ten school districts in Oconto County. One such school district is the Oconto Unified School District, which serves approximately 1,000 students and covers approximately 75 square miles. The district operates 3 school buildings, including 1 elementary school, 1 middle school, and 1 high school as well as 1 charter school, and 1 alternative school, which are both housed in the same facility as the middle school. The elementary school provides a 4K program that is open to all students. Oconto School District also has an Early Childhood program that services 3 and 4 year old students if they are identified for special education services. Oconto Unified School District gets an overall score of 69.2 on its District Report Card, with chronic absenteeism as one of the target group outcomes and 50.4% of the student population classified as economically disadvantaged.

Another county is Brown County, which has 8 school districts, one of which is the Green Bay Area Public School District. With more than 19,000 students, this Northeast Wisconsin district is the fourth largest public school district in the state. Boasting 42 schools, the Green Bay Area Public School District was founded in 1856 with the first city-built school known as the Sale School. The District Report Card provides Green Bay Area Public School District with an overall score of 59.5. Nearly 65% of the students in this district are economically disadvantaged and 20.7% are English learners.

These school districts provide some examples of the type of schools and students that will benefit from access to high speed broadband services. The proposed middle mile network will allow other service providers to easily interconnect at an affordable price to provide these students with the broadband needed to complete homework assignments and participate in remote learning. End-user carriers will then be able to work with the local schools and libraries to participate in programs like E-Rate or the FCC's Emergency Connectivity Fund.

h. Actions taken by a city, village, town, or county in support of the grant application.

Wisconsin State Senator for the 12th Senate District, Mary Felzkowski, and Wisconsin State Representative for the 36th Assembly District, Jeff Mursau, submitted a joint letter of support for the proposed project. The proposed middle-mile network will run through the 12th State Senate district and 36th State Assembly District, a region that has been "trailing" other Wisconsin regions in broadband investment and state broadband grant awards. The representatives acknowledge that the proposed service area has worked particularly hard to "attract economic development opportunities, retain Wisconsin workers and residents, and increase broadband-related opportunities like telemedicine and virtual learning." Thus, their support letter urges the Wisconsin Public Service Commission to strongly consider the broadband grant applications proposing to extend broadband into Northeastern Wisconsin.

The Director of Marinette County's Economic Development Program, Jennifer Short, also submitted a letter of support for the proposed project, confirming that a highly redundant and

secure middle mile network, such as the one proposed, would be highly attractive to high tech businesses and manufacturing entities that require access to a highly resilient network. The letter states that “robust middle mile network could substantially accelerate deployment of broadband services to Marinette residents in unserved or underserved areas.” The letter also discusses how the proposed project “fills a need in providing a strong middle mile network that could ensure wireless broadband services are able to meet the growing needs of Marinette County residents.” In furtherance of this project, Marinette County participated in the New North Regional Broadband Access Study.

Barb LaMue, President and CEO of New North, also provides a letter of support. New North is a 501(c)(3) regional economic development corporation that serves 18 counties in Northeast Wisconsin. Her letter details the findings of the New North Study, which encompasses part of the study’s recommended geographic route for a middle-mile route, specifically in Marinette and Oconto Counties, areas which have identified broadband needs in the region. Ms. LaMue continues that this project will bring economic development benefits to the region, attract businesses, and recruit and retain talent.

Finally, as evidence of Huron’s public-private partnership with Florence County, via its parent company Pacific Fiber Network (PFN), and efforts to provide Next Generation 911 (NG911) service to the county, the Sheriff of Florence County, Dan Miller, provided a letter of support for the proposed project. PFN currently provides a fiber middle-mile and backbone network, similar to the one proposed, in Florence County through a public-private partnership. PFN provides NG911 service to the county, allowing citizens to text 911, creating greater interoperability between call centers, and assisting in call volume management. Huron, with the help of PFN, has also planned collaborative efforts with local public safety and 911 facilities to offer Next Generation 911 (NG911) service in the proposed project area. Huron, through its parent company PFN, has extensive experience working with 911 call centers and government entities to provide NG911 capabilities to the communities it serves.

i. Letters and messages in support of the application.

Huron includes with its application (i) a joint letter of support from Sen. Mary Felzkowski and Rep. Jeff Mursau, (ii) a letter of support from the Director of Marinette County Economic Development, Jennifer Short, (iii) a letter of support from New North Inc., a nonprofit, regional economic development corporation that fosters collaboration among private and public sector leaders throughout the eighteen counties of Northeast Wisconsin, and (iv) the Sheriff of Florence County, Dan Miller.

j. Any other equitable factor that the applicant desires to discuss, including one or more of the factors in Wis. Stat. § 196.03(6) that the applicant believes its project would advance.

Huron is committed to providing reasonably adequate telecommunications service or a reasonable and just charge for that telecommunications service as indicated under Wis. Stat. § 196.03(6). The proposed project would enhance each of the equitable factors outlined in the statute.

Better access to broadband, as proposed in this project, will give residents and businesses in the area access to better economic, health, and educational opportunities. Better Internet will make it easier for adults to pursue and participate in post-graduate education programs or further job certifications online, thereby increasing their chances of finding higher-paying jobs. More reliable Internet will also provide customers with access to telehealth services, including to specialists that would normally be out of reach due to geographical limitations. Additionally, high-speed Internet will spark community development and attract more industry, furthering economic opportunities in and enhancing the quality of life for residents in the proposed service area.

Finally, the proposed project will promote universal service by making it easier for end-user carriers to serve the proposed service area, thus preserving competition in the Wisconsin telecommunications industry, promoting consumer choice, and driving down costs for customers. The proposed project will help provide broadband to end-users at more affordable rates. Huron's proposed middle-mile network will provide a high-capacity, redundant, and diverse fiber-based infrastructure for multiple local fiber-to-the-premises providers, cellular providers, and fixed wireless operators that have towers in these communities to leverage to provide broadband service to residents and businesses along the network's path. This will lower current expenses associated with serving and potentially increase the number of providers willing to serve the rural underserved and unserved communities in the proposed service area. Furthermore, it would allow qualifying customers, schools, and libraries to access broadband at discounts offered through programs such as Lifeline, Emergency Broadband Benefit, and E-Rate.

ATTACHMENTS

Huron Communications Co.

Marinette-Oconto-Brown Middle Mile Fiber Project

Price List

* All Facilities Will Be Owned

Green Bay DWDM and Packet Services																			Total
Item	Cost/unit	Marinette		Green Bay		Crivitz		Iron Mountain		Oconto Falls		Coleman		Wausaukee		Pembine			
Facility		Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost		
Power Drop	\$2,650.00		\$0.00		\$0.00	1	\$2,650.00		\$0.00	1	\$2,650.00	1	\$2,650.00	1	\$2,650.00	1	\$2,650.00	\$13,250.00	
Electrician	\$2,900.00		\$0.00		\$0.00	1	\$2,900.00		\$0.00	1	\$2,900.00	1	\$2,900.00	1	\$2,900.00	1	\$2,900.00	\$14,500.00	
Hut	\$52,732.00		\$0.00		\$0.00	1	\$52,732.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$52,732.00	
Lot	\$42,000.00		\$0.00		\$0.00	1	\$42,000.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$42,000.00	
Foundation	\$15,595.00		\$0.00		\$0.00	1	\$15,595.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$15,595.00	
Hut Placement	\$3,100.00		\$0.00		\$0.00	1	\$3,100.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$3,100.00	
Cabinet	\$7,110.00		\$0.00		\$0.00		\$0.00		\$0.00	1	\$7,110.00	1	\$7,110.00	1	\$7,110.00	1	\$7,110.00	\$28,440.00	
Cabinet Placement	\$8,450.00		\$0.00		\$0.00		\$0.00		\$0.00	1	\$8,450.00	1	\$8,450.00	1	\$8,450.00	1	\$8,450.00	\$33,800.00	
Fuse Panel	\$1,095.00	1	\$1,095.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$1,095.00	
Rectifier 20	\$2,850.00		\$0.00		\$0.00	1	\$2,850.00		\$0.00	1	\$2,850.00	1	\$2,850.00	1	\$2,850.00	1	\$2,850.00	\$14,250.00	
Rectifier 30	\$3,095.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$0.00	
Patch Panel	\$4,095.00		\$0.00	1	\$4,095.00	1	\$4,095.00	1	\$4,095.00	1	\$4,095.00	1	\$4,095.00	1	\$4,095.00	1	\$4,095.00	\$24,570.00	
Batteries	\$610.00		\$0.00		\$0.00	8	\$4,880.00		\$0.00	4	\$2,440.00	4	\$2,440.00	4	\$2,440.00	4	\$2,440.00	\$14,640.00	
Battery Heater	\$105.00		\$0.00		\$0.00		\$0.00		\$0.00	1	\$105.00	1	\$105.00	1	\$105.00	1	\$105.00	\$420.00	
Total			\$1,095.00		\$4,095.00		\$130,802.00		\$4,095.00		\$30,600.00		\$30,600.00		\$30,600.00		\$30,600.00	\$258,392.00	
Electronics																Total	\$262,487.00		
8114 Kit	\$63,347.00		\$0.00	1	\$63,347.00	1	\$63,347.00	1	\$63,347.00		\$0.00		\$0.00		\$0.00		\$0.00	\$126,694.00	
5164	\$10,439.00		\$0.00		\$0.00		\$0.00		\$0.00	1	\$10,439.00	1	\$10,439.00	1	\$10,439.00	1	\$10,439.00	\$41,756.00	
5164 100G Grey	\$8,600.00		\$0.00	1	\$8,600.00	2	\$17,200.00	1	\$8,600.00	2	\$17,200.00	2	\$17,200.00	2	\$17,200.00	2	\$17,200.00	\$94,600.00	
6500 WSS	\$25,100.00	1	\$25,100.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$25,100.00	
8110 Coherent Optic	\$17,700.00	1	\$17,700.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	\$17,700.00	
6500 7 Slot System	\$40,000.00		\$0.00	1	\$40,000.00	1	\$40,000.00	1	\$40,000.00		\$0.00		\$0.00		\$0.00		\$0.00	\$80,000.00	
Misc Installation	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	1	\$100.00	\$700.00	
Total			\$42,900.00		\$112,047.00		\$120,647.00		\$112,047.00		\$27,739.00		\$27,739.00		\$27,739.00		\$27,739.00	\$386,550.00	
Labor																Total	\$498,597.00		
Engineering/Turn Up	\$115.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	35	\$4,025.00	\$28,175.00	
Field Tech/Install	\$95.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	25	\$2,375.00	\$16,625.00	
Management Oversight	\$150.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	10	\$1,500.00	\$10,500.00	
Total			\$7,900.00		\$7,900.00		\$7,900.00		\$7,900.00		\$7,900.00		\$7,900.00		\$7,900.00		\$7,900.00	\$55,300.00	
																Total	\$63,200.00		

\$124,042.00

Project Total \$824,284.00

\$700,242.00

Wisconsin Portion
Project Total



WISCONSIN LEGISLATURE

P. O. Box 7882 Madison, WI 53707-7882

March 15, 2022

Public Service Commission of Wisconsin
4822 Madison Yards Way
PO Box 7854
Madison, WI 53707-7854

Dear Chairperson Cameron Valcq,

Please accept this letter in support of Peninsula Fiber Network's (PFN) Broadband Expansion Grant application. We strongly believe that PFN would make excellent use of this grant funding for their middle mile project to serve Northeastern Wisconsin.

The majority of PFN's proposed middle mile project would run through the 12th State Senate District and 36th State Assembly District, which we are pleased to represent. For years, this region has worked to attract economic development opportunities, retain our Wisconsin workers and residents, and increase broadband-related opportunities like telemedicine and virtual learning. The deployment of a robust fiber route would go a long way towards helping this region as it works to make these goals a reality.

The New North, a regional economic development agency, recently published a broadband study which identified the need for a regional middle mile network. PFN's project largely mirrors the middle mile route proposed by New North in the study's recommendations. Without such a fiber route, it is more costly to provide broadband services to unserved residents or to businesses requiring high-speed high-capacity service. This project, as proposed by PFN, could trigger other broadband investments in this part of the state where broadband expansion is sorely needed.

The recent rounds of state broadband grant funding have been instrumental in promoting broadband investment and deployment throughout Wisconsin. We urge the PSC to strongly consider the broadband grant applications in Northeastern Wisconsin. Our region is trailing other Wisconsin regions in broadband investment and in state broadband grant awards. Ultimately, the deployment of PFN's middle mile project will act as a catalyst for further broadband expansion in this region, which will benefit the businesses and people of the Northwoods.

Thank you for your time and consideration of our request. Should you have any questions, please feel free to contact us.

Sincerely,

Senator Mary Felzkowski
Wisconsin State Senator
12th Senate District

Representative Jeff Mursau
Wisconsin State Representative
36th Assembly District



MARINETTE COUNTY DEVELOPMENT & TOURISM

TO: Wisconsin Broadband Grant Program

FROM: Jennifer Short
Director, Marinette County Economic Development

DATE: March 7, 2022

RE: Support for Peninsula Fiber Network Broadband Grant Application

Marinette County Economic Development is pleased to support the grant application of Peninsula Fiber Network for its proposed middle mile project in Northeast Wisconsin for the following reasons:

- *A robust middle mile network could substantially accelerate deployment of broadband services to Marinette residents in unserved or underserved areas.* With a stable and functional middle mile network in place, a private provider could allocate most of its funding to connect homes and businesses, rather than utilizing resources to install additional middle mile facilities.
- *The completion of PFN's proposed project would create a highly redundant and secure network through the middle of Marinette County. This type of network is highly attractive to high tech businesses, manufacturing entities and any business that requires a highly resilient network.* PFN's existing network in Wisconsin serves the eastern side of Marinette County. Their proposed project would complete a loop making the entirety of their Wisconsin facilities redundant and resilient.
- *PFN's proposed project fills a need in providing a strong middle mile network that could ensure wireless broadband services are able to meet the growing needs of Marinette County residents.* Marinette County residents continue to utilize broadband wireless service for their work from home, telemedicine services and even business needs. The reliance on this type of service continues to grow and with it the need for increased bandwidth.
- *Marinette County participated in the New North Regional Broadband Access Study. PFN's proposed project has the direct potential to assist Marinette County in achieving the numerous policy recommendations suggested for Marinette County and its broadband needs.*

Marinette County looks forward to working with Peninsula Fiber Network as it looks to increase its investment in Marinette County and continue serving Wisconsin. The Public Service Commission should approve PFN's application for its middle mile grant application for the benefit it brings to Marinette County residents and the county's economic development efforts. Please contact me if you have any questions.

Jennifer Short

Economic Development & Tourism Director, Marinette County, WI
1926 Hall Ave.
Marinette, WI 54143
715-732-7503 | Jennifer.Short@marinettecounty.com



March 11, 2022

Public Service Commission of Wisconsin
4822 Madison Yards Way | PO Box 7854 | Madison, WI 53707-7854

RE: Support of Peninsula Fiber Network's Grant Application

Dear Chairperson Cameron Valcq,

New North, Inc. is a 501(c)3 nonprofit, regional economic development corporation that fosters collaboration among private and public sector leaders throughout the 18 counties of Northeast Wisconsin, known as the New North region. New North is pleased to support Peninsula Fiber Network's (PFN) grant application for its proposed middle mile project in Northeast Wisconsin for the following reasons:

New North recently completed its Broadband Access Study. This comprehensive project analyzed infrastructure assets and broadband availability, surveyed area residents and businesses, provided connectivity solutions, suggested grant funding opportunities, and developed a middle mile broadband strategy for the region. The middle mile strategy recommendation is to develop a regional middle mile network throughout our 18-county region through public/private partnerships. **PFN's proposed middle mile project encompasses portions of the study's recommended geographic route for a middle mile network, specifically in Marinette and Oconto Counties. Connecting several communities identified as having broadband needs in our region. ISPs could extend access and availability to residents and businesses more quickly by utilizing PFN's network.**

This proposed project will expand PFN's existing middle mile network that is deployed along US41 from Marinette to Green Bay and from Iron Mountain into Florence County. The existence of a completed middle mile fiber ring in the New North region will make the region more attractive to high tech businesses like data centers, cloud storage facilities, high performance computing facilities, and related technology companies that need access to highly resilient "fail resistant" networks. **PFN's proposed project will extend the middle mile network through central Marinette and Oconto Counties, both underserved portions in the New North region, adding economic development benefits for the region as New North works to attract businesses, recruit and retain talent, and expand broadband.**

As our study concludes, "... business people and their families make relocation decisions based on quality of life only where there is abundant and affordable broadband, because broadband is the enabler of this new approach to personal and work life." **PFN's middle mile project will assist the New North region in achieving its broadband goals as well as acting as a catalyst for economic prosperity in the region.**

For these reasons, we look forward to working with our local partners and PFN as it looks to increase its investment in the New North region. We support the Public Service Commission in its approval of PFN's grant application for its middle mile project. Please contact me if you have any questions.

Barb LaMue, President & CEO
barb.lamue@thenewnorth.com

Florence County Sheriff's Office

"A Community Resource"

☆ Sheriff, Dan Miller ☆

TO: Wisconsin Broadband Grant Program
FROM: Sheriff Dan Miller
Florence County, Wisconsin

DATE: February 16, 2022

RE: Support for Peninsula Fiber Network Broadband Grant Application

I am writing today in support of Peninsula Fiber Network and its application for a grant through the Wisconsin Broadband Grant Program. It is without hesitation that I encourage the Public Service Commission of Wisconsin to award PFN this grant based on the merits of their service to Florence County and the positive impact their service has on the safety and well-being of its residents.

In 2021, Florence County entered into an agreement with PFN for Next Generation 911 service (NG911). This IP based 911 service runs on PFN's network which is redundant, resilient, and provides state of the art services for callers needing emergency assistance on the 911 system.

Emergency callers in Florence County can text 911 and our center can text back or now text any caller at any time. PFN's NG911 service utilizes foreign-language text translation services allowing a caller to contact 911 emergency service in their native language which is translated for the 911 dispatcher who is then able to reply using the translation services. PFN also provides services for the 911 call centers that help manage call volume, allow for greater interoperability between call centers, decreases call answer time, and allows for caller location identification. Florence County can now more reliably transfer and receive 911 calls across the interstate border with caller location identification.

PFN's proposed project would have a positive impact on our state's public safety by expanding this resilient network and creating opportunities for other counties to utilize NG911 services. I encourage the Public Service Commission to approve PFN's application for its middle mile grant application. Please contact me if you have any questions.



Dan Miller - Sheriff
P.O. Box 678
Florence, WI 54121
dmiller@florencecountywi.gov
715-528-3346